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ABSTRACT

Today Sweden has a highly developed comprehensive system of public elementary and secondary schools, along with universities and other institutions of higher education. Most of the actual administration of educational matters is the responsibility of three appointed national government agencies operating under the overall jurisdiction of the Minister of Education and Ecclesiastical Affairs --National Board of Education, Board of Institutes of Technology, Office of the Chancellor of Universities. Most types of schools are operated by local school committees. Financing of education comes from the National Government and the Municipalities. Compulsory schooling begins at the age of seven and lasts for seven years. Because a number of types of older secondary schools exist, there are several paths open to the student --upper secondary schools, vocational schools, or art and music schools. Sweden has four universities, two higher technological institutions, and fifteen special institutions of higher education. As far as teacher education is concerned, students usually begin teacher training midway through secondary school. Folk High Schools are the chief means of carrying on adult education activities. Special education is also an integral part of the educational system. (SBE)

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SWEDEN

Educational Data

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The Country

Sweden is a narrow, elongated country forming the eastern part of the Scandinavian peninsula. Stretching from the Arctic Circle in the north to the Baltic Sea in the south, it is bounded on the west and north by Norway, and on the east by the Gulf of Bothnia and Finland. Sweden has a land area of roughly 450,000 square kilometers, or 173,360 square miles, and for administrative purposes is divided into 24 counties.

Because of the warm Gulf Stream which runs along the Norwegian coast, Sweden enjoys a relatively favorable climate. It is heavily forested, and other important natural resources are the farmlands of the central and southern areas, iron ore in the north and central parts, and water power derived from the rivers in the Norrland region. The chief exports are paper pulp and timber, iron ore, steel, and machinery.

Sweden is the largest and most populous of the Scandinavian countries. In 1962, its population was 7,581,237, with the greatest concentration in the central and southern areas. Except for a few thousand Lapps in the northernmost region, Sweden has a homogeneous population with respect to its background, racial origin and language, as well as religion, the majority of the Swedish people belonging to the official Evangelical Lutheran Church. The percentage of the population engaged in the principal occupations runs about as follows: Farming and subsidiary occupations, 23.4 percent; industry and handicrafts, 41; communications, 8.5; trade, 13; government employment, 9.6; domestic work, 2; and the professions, 2.5 percent.

History of Swedish Education

During the Middle Ages "Latin Schools" were founded in Swedish medieval cathedral towns under the auspices of the cathedral or ecclesiastical authorities. These schools were established for the purposes of giving carefully chosen young boys the necessary instruction, especially in Latin, to prepare them for the priesthood.

Later, as the economic and social position of the average laymen grew stronger, "Town Schools" were established, offering secular instruction to local youths considered by town authorities to be worthy of such training. Well-to-do families often provided private tutors.

In the 17th century a special type of school, the *gymnasium*, was established, patterned at first after the older Latin School, providing instruction for selected groups of boys. During the 17th and 18th centuries, the *gymnasium* was regulated by a series of governmental Education Acts and acquired the dual purpose of preparing for university and providing a general, secondary education.

During the 19th and 20th centuries many changes in Swedish education occurred. So-called writing and arithmetic classes had already been formed for theoretically "less advanced pupils." By 1820, these classes had expanded and were called "Apologetics Schools," which in 1849 were combined with the *gymnasium*. At the same time the "science line" (curriculum stressing science) of the *gymnasium* was introduced, and took its place along with the "classical line" (curriculum stressing Latin). In 1904 the *realskola* came into being as a lower secondary school, while the *gymnasium* became the upper secondary school. The *realexamen* was introduced as the final examination of the *realskola* course. Gradually, the study of Latin began to lose favor in the *realskola* and finally, by 1904, was restricted to the upper secondary school (*gymnasium*) curriculum.

The *realskola* and *gymnasium* were restricted by local authorities to those children considered capable of receiving an education beyond reading and writing and scriptural knowledge. General elementary education for the public at large also had a long and varied history. In the 16th century the local bishop performed the task of checking the reading and scriptural knowledge of the peasants. Legislation was enacted by ecclesiastical authorities in 1686 providing that the parish clerk in every village should be responsible for elementary education. However, elementary schools (imparting reading and scriptural knowledge to the children of peasants) existed in only a few villages, but by the beginning of the 18th century the number of these schools had increased considerably.

In 1842 a law establishing the *folkskola* (public elementary school) was enacted. This was the beginning of basic, compulsory schooling for all children, boys and girls. Since then, laws have been enacted concerning the qualification of teachers and the

improvement of the *folkskola*. Today Sweden has a highly developed system of public elementary and secondary schools, along with universities and other institutions of higher education.

School Administration

Sweden is a constitutional monarchy with a bicameral parliament. Executive power is vested in the King, acting on the advice of his Ministers. Legislative authority is shared between the King and Parliament (*Riksdag*). As in other parliamentary systems of government, the King, in actual practice, chooses his Ministers from among the members of the controlling party in Parliament, and is expected to accept their advice. The King's Ministers, headed by the Prime Minister, form a "Council of State," or Cabinet. Executive actions are legally taken in the name of the "King-in-Council."

A Minister, who is a member of the Council of State, heads the National Ministry of Education and Ecclesiastical Affairs (*Kungliga Ecklesiastikdepartementet*), which was established in 1841. The Minister is usually a member of Parliament, although there is no law requiring such membership. The Ministry is vested with most of the National Government's administrative responsibilities for education. It also deals with matters related to archives, church affairs, libraries, museums, national theaters and research councils. Certain specialized responsibilities involving education come under the jurisdiction of other Ministries, such as Agriculture, Commerce, Defense, Foreign Affairs, and Social Affairs.

Although the Ministry of Education and Ecclesiastical Affairs does not directly operate educational institutions, it exercises powers of control over schools, institutions of higher learning, and other institutions not assigned to other Ministries by the King-in-Council. According to Article 10 of the Constitution, the Ministry also "collects necessary information from the competent administrative offices" and makes proposals for educational changes and legislation to the Council of State and to Parliament.

Most of the actual administration of educational matters is the responsibility of three national government agencies appointed by the Council of State and operating under the overall jurisdiction of the Minister of Education and Ecclesiastical Affairs. These agencies are:

1. The National Board of Education (*Kungliga Skolöverstyrelsen*). Today, the present Board continues its long-time jurisdiction over teacher-training schools and schools providing general education

or practical knowledge of a general character, including elementary schools, secondary schools, folk high schools and certain other forms of adult education, along with its newly acquired vocational functions. On October 1, 1964, the previously existing Board of Education and Board of Vocational Training were combined by decision of Parliament and given one name, the National Board of Education. As a result, the new Board acquired jurisdiction over business schools, schools for domestic training, technical high schools, and trade schools. The final makeup of the new Board is still in process of determination.

The former National Board of Education had as its chief officer a Director General. Under him were (1) departments concerned with administration, experiments, organization and teaching; and (2) independent sections for adult education, planning and building, school hygiene, and school welfare. The supervision of upper secondary schools was carried out directly by Board inspectors. Consultants in various fields have been attached to the Board. The former Board of Vocational Training had a Director in Chief and 15 members, including representatives of management and labor.

2. Board of Institutes of Technology (*Överstyrelsen för de tekniska högskolorna*). This Board has jurisdiction over Chalmers Institute of Technology in Gothenburg and the Royal Institute of Technology in Stockholm. It consists of a President and six members.
3. Office of the Chancellor of Universities (*Universitetskanslerämbetet*). This Office controls Caroline Medico-Surgical Institute, the colleges of dentistry, and the universities. It is headed by a Chancellor who is nominated by representatives of the Universities.

Other bodies directly appointed by the King-in-Council are: the Swedish Medical Research Council, the Swedish Natural Science Research Council, and the Swedish Social Science and Legal Research Council.

Most types of schools (elementary, comprehensive, lower secondary, girls' schools, full secondary schools, commercial secondary schools, and vocational schools) are directly operated by local school committees (*skolstyrelsen*) chosen by municipal authorities.¹ The final authority is the National Board of Education.

The local school committees in turn, fall under the jurisdiction of County Educational Boards (*lansskolnämnd*) composed of two educators, one lawyer, and four laymen, one of the noneducators receiving appointment as Chairman by the National Government.

The County Boards are under the jurisdiction of the combined National Board of Education. The National Board, as explained earlier, is controlled by the Minister of Education and Ecclesiasti-

¹ A municipality means a local community. The size of the community may range from a village of 200 such as Holmön to the capital city of Stockholm with 800,000 inhabitants. About 60 percent of the municipalities have less than 4,000 inhabitants.

cal Affairs. The National Government, however, looks to the County Educational Boards for planning and coordination of the schools within the jurisdiction of the counties.

Educational Finance

Financing of Swedish education, for both general and vocational schools, comes from two sources—the National Government and the municipalities (incorporated communities). Whether a school may be called a State or municipal school depends upon the degree of its financing by the national or local government, and upon which authorities instigated its establishment.

National grants are made for special purposes, such as teachers' salaries, buildings, equipment, textbooks and teaching materials, school hygiene, school meals, libraries, and school transportation. The amount of national grants for teachers' salaries is fixed by Parliament. At present, the National Government pays almost 100 percent of salaries for class teachers in the *folkskola* and 78 percent for practical subject teachers, teachers in higher municipal schools (general secondary schools), and in certain vocational training schools. National grants for buildings cover about 40 percent of the fixed costs. In the case of grants for textbooks, school hygiene, libraries, and school meals, the amount is calculated according to the number of pupils and the municipality's economic strength.

In general, the school financial burden is about equal for the National Government and the municipalities. However, the tendency to add the financial support given by the National Government to all forms of education continues to increase.

National grants for education during 1963–64, in Swedish kronor, were as follows:

Grants	Amounts in
	kronor (Exchange value, 19.40 cents)
Administration and experiments -----	29,000,000
Compulsory education (elementary education) -	1,119,000,000
Real schools and <i>gymnasiums</i> -----	390,000,000
Vocational training schools -----	139,000,000
Folk high schools -----	27,000,000
Higher education and research -----	269,000,000
Teacher training -----	96,000,000
Welfare -----	263,000,000
Miscellaneous (archives, libraries, museums, adult education, investment grants) -----	280,000,000
Total -----	2,612,000,000

The total sum is 307,000,000 kronor greater than that for the equivalent period in 1962-63, representing an increase of approximately 13.3 percent. For the base year 1958, 4.14 percent of the gross national product was expended on education. The estimate for 1970 is 4.69 percent.

Grants for erection and maintenance of school buildings are not included in the foregoing 1963-64 list of national grants, since figures are not available to show the amount spent by municipalities for these purposes. A sum of 350,000,000 kronor was expended by the national government for the erection and maintenance of school buildings in 1963-64. Included in these expenditures are buildings for elementary schools, the lower secondary school (*real*) section of *gymnasiums*, certain "independent" (special) State *real* schools, municipal girls' schools, municipal *real* schools, and practical *real* schools. About 47,000,000 kronor were expended on vocational schools. The sum spent on *gymnasium* buildings not entitled to ordinary national grants is not specified.

Aid to Students

General supervision of financial aid to students comes under the jurisdiction of the National Board of Education. As the total budget for education has expanded in recent years, the amount of money devoted to grants and scholarships has also increased.

Those pupils attending general secondary and vocational schools beyond the 7 to 9 years of compulsory schooling may obtain financial assistance in a number of ways.

Subsidies are granted by the National Government to those pupils who are unable to obtain the desired instruction in the vicinity of their homes. For this assistance no inquiries are made into the pupil's economic situation. In contrast to the granting of subsidies, the government grants scholarships to pupils who are shown to be in economic need and whose scholastic records are good. Financial support to needy pupils is also available from municipalities, county councils, private foundations, and organizations of various types, commercial and industrial firms, and from individual citizens.

At the higher education level, loans are available to students who are qualified for higher study and who can show that they are in need of economic aid. This applies to students in teacher-training institutions and in technical schools as well as to those in the universities.

School Enrollments

Enrollments of pupils in various types of schools showed marked fluctuations from 1961 to 1963 because of the introduction of the system of 9-year, compulsory, comprehensive schools, which are discussed later.

Enrollments 1963

<i>Type of School</i>	<i>Number of Pupils</i>
Elementary schools -----	856,000
(All schools covering period of compulsory education including comprehensive schools)	(including 3,500 pupils in combined <i>real</i> and elementary schools)
Further education -----	220,707
(<i>Gymnasiums</i> , <i>real</i> and girls' schools)	
Vocational schools -----	167,215
(Full-time and part-time)	(including technical and commercial <i>gymnasiums</i>)
Institutions of higher education -----	45,385
Teacher-training schools -----	4,849
Folk high schools -----	11,957
Total -----	1,316,113

According to the statistics for 1960 given at the Policy Conference on Economic Growth and Investment in Education, held by the Organization for Economic Cooperation and Development at Washington, D.C. in October 1961, the percentages of the total age groups actually attending Swedish schools were approximately as follows:

<i>Age group</i>	<i>Percent</i>
5-14	82
15-19	32
20-24	11

The following figures illustrate the increase in enrollments at institutions of higher education between 1956-57 and 1960-61:

<i>Institutions</i>	<i>1956-57</i>	<i>1960-61</i>
University of Uppsala -----	5,600	10,997
University of Lund -----	5,012	7,300
University of Stockholm -----	4,489	6,699
University of Gothenburg -----	1,867	3,300
Royal Institute of Technology -----	2,560	3,400
Chalmers Institute of Technology -----	1,975	2,400

Educational Reform: The New Comprehensive School

Sweden is in the midst of changing and reorganizing her entire elementary and secondary school systems. The importance of this action requires that the current reform measures be discussed as a background to a better understanding of the present-day elementary and secondary schools.

For a number of years a discussion has been carried on among Swedish educators as to the proper age for transfer of a child from elementary to secondary schooling. The question was brought to the attention of the national legislature when the 1946 School Commission appointed by Parliament recommended that a "unitary" or 9-year "comprehensive" school (*enhetsskola*) be established on an experimental basis to cover the entire period of compulsory schooling. Under the then existing system, 7 years of schooling were compulsory, a child usually entering school at 7 and continuing to the age of 14. The School Commission further recommended that the school-leaving age be extended to the age of 16 at the time the new plan requiring 9 years of compulsory shall become available to all children. All types of schools, elementary and secondary, are expected to be integrated over a period of years into one public school system.

In 1948 the School Commission, set up by the National Government to organize and report on the plan, asked 14 selected school districts representing highly diversified areas of the country to participate in experimental activities with a 9-year comprehensive school, starting their operations in school year 1949-50. A Division of Experimental Activities was established within the Board of Education. The activities of this division were greatly expanded between 1949 and 1959. During this period the division continued to carry out various types of experiments with regard to "grouping of pupils," "differentiated or undifferentiated classes," and a system of "tracks."

On the basis of all the experiments completed and reports prepared a government Education Act was brought before Parliament in 1950. The main reason for introducing the comprehensive system as expressed by the Minister of Education was as follows:²

A reform work which is intended to bridge the old gaps between social classes must see to it that the school system appears to all groups in society as a unitary construction, within which there are

² U.S. Department of Health, Education, and Welfare. *School Reform in Sweden*, by Torsten Husen. Office of Education: Studies in Comparative Education. Washington, D.C. Government Printing Office, 1961. p. 22.

available and open ways for all young people and where each growing individual, independent of his social starting point in life, will have the opportunity to learn how he can best utilize his potentialities for his future tasks. Such a goal cannot be compatible with an overt or disguised parallel school system. A differentiation into separate schools should not according to my conviction take place until it is necessary with regard to vocational choice.

The Education Act was passed almost unanimously by Parliament. It called for a 9-year comprehensive school covering three stages, each having three classes. The end of the designated experimental period was reached at the close of the school year 1961-62. By that time the new schools were established on a permanent basis, and about 50 percent of Swedish children had access to them.

According to the Swedish Government's Report to the International Conference on Public Education at Geneva in July 1964, the new, comprehensive schools were available to about 70 percent of the school population during 1963-64; and at the end of the year 1964-65 the total is expected to reach about 80 percent. For the period from July 1, 1962 to June 30, 1970, it is estimated that the number of comprehensive schools will increase at such a rate that on the latter date all children of compulsory school age will be attending the new schools.

As the new schools begin to function they are replacing many of the older schools, such as the *folkskola*, the girls' schools, and certain vocational schools, and new curriculums are incorporating many features of the older programs.

The ninth and final year of the comprehensive school is divided into "streams" or sections. Those who complete the required "stream" are eligible to continue their studies at the upper secondary school (*gymnasium*). For those who do not plan to attend a *gymnasium* and yet would like to have some schooling beyond the 9-year period, 2-year "continuation" schools are to be established. They will have four branches: general, technical, commercial, socioeconomic. Their purpose is to enable the student to have a broader foundation upon which he may base his final choice of an occupation.

When the changeover to comprehensive schools becomes complete in 1970, Sweden will have moved a long way from the deeply rooted practice of maintaining parallel elementary and secondary school systems. According to plan, when the reform is in full operation, the name of the comprehensive school (*enhetsskola*) will be changed to basic school, (*grundskola*).

Preschool Education

There is no compulsory preschool education in Sweden. A steadily increasing number of voluntary schools have appeared, however, especially in towns and industrial districts where the greatest need has arisen. The first preschool education was in private hands. Later, many municipalities and semipublic organizations and industrial enterprises became interested. The National Government now makes a small grant to aid the schools, which are intended for children between the ages of 4 and 6, and plans to make increased grants in the future to help their growth and expansion.

The schools are known as "preschools," "child nurseries," "kindergartens," and *leksskolor* (play schools), which is their official name. The *leksskolor* do not belong to the regular school system, but come under social welfare enterprises.

No official curriculum is prescribed. Internationally recognized principles and methods for kindergartens are followed, with adaptations to Swedish needs. Preschool training is considered an aid in preparing the child for beginning his compulsory schooling.

Elementary Education

Compulsory schooling in Sweden at present begins at the age of 7 and lasts for 7 years, but on a voluntary basis, may start at the age of 6 for children indicating sufficient maturity. Municipalities have the right to require 8 years, or even 9, of compulsory school attendance. Thus, because of the introduction of comprehensive schools, the period of compulsory schooling in an increasing number of municipalities is now 9 years.

The school year extends from the end of August to the end of June for approximately 214 school days. Pupils attend school 6 days a week, but the desirability of a 5-day school week is now being considered.

The country is divided into 1,000 school districts, and throughout, comprehensive schools and the older *folkskolor*, or elementary schools, exist side by side. The *folkskolor* offer seven grades or classes with the possibility of an eighth year for those who do not transfer to secondary schools (see table 1).

In the comprehensive schools, one fundamental aim in the design of the curriculum is adapting the distribution of subjects to the

intellectual maturity of the pupils. As mentioned in the discussion of the comprehensive school, the final year of this school (grade IX) is divided into "streams" or sections, stressing the type of schooling the pupil intends to pursue. These sections are also called "differentiated classes." Table 2 lists the curriculums for the first six grades of the *enhetsskola*, and for grades 7 through 9.

Secondary Education

Because a number of types of older secondary schools, such as the *realskola*, (lower secondary school) the girls' schools, and the 3- or 4-year *gymnasium*, are presently continuing in operation along with the *enhetsskola*, there are several paths open to the student in pursuing his secondary schooling, depending upon the "stream" or curriculum he has chosen in the ninth grade of the *enhetsskola*. In those areas where the comprehensive school is now in full operation, the normal procedure is for students first to complete stream "g" of the ninth grade, and then enter a 3-year *gymnasium*, or upper secondary school; or finish stream "t", "m", "mek", or "ha" (see table 3 for explanation of symbols), and attend a vocational school.

Students who have attended 4 years of the older *folkskola* usually enter a 5-year *realskola*, pass the *realexamen*, and proceed to a 3-year *gymnasium* or upper secondary school. As an alternative one may, after 6 years at a *folkskola*, attend a 4-year *realskola*, pass the *realexamen*, and finally attend a 3-year *gymnasium*. It is also possible to enter a 4-year *gymnasium* after completing the next to last year of a *realskola* without passing the *realexamen*. Girls may attend a *folkskola* for 4 years, then spend 5 years at a *högre flickskola* (municipal girls' general secondary school) and finally proceed to a 4-year *gymnasium*; or, they may finish 6 years at a *flickskola* and spend 3 years at a *gymnasium*.

At the end of the complete academic secondary program, whether 12 or 13 years in length, the student will normally take the *studentexamen*, a national examination qualifying for admission to a university. Success in this examination is also regarded as generally acceptable by many institutions of higher learning in the United States as a basis of consideration for university or college admission. Whether passing the *studentexamen* may exempt a student from a portion of the freshman year in an American college would depend upon the exact program followed in the

Table 1.—Number of class periods per week for the 7-year elementary school (folkskola): by curriculum subjects

Subject	Year Age	I 7	II 8	III 9	IV 10	V 11	VI 12	VII 13	Total Hours	Percentage of time for each subject
1		2	3	4	5	6	7	8	9	10
Hours										
Total		20	24	32	34	36	36	36	218	99.99
Religion		2	2	2	2	2	2	2	14	6.42
Swedish		9	11	11	10	10	9	7	67	31.31
English		—	—	—	—	4	6	4	14	6.42
History		—	—	—	2	2	3	1½	5	2.29
Civics		—	—	—	—	—	—	1½	5	2.29
Geography		—	—	—	2	2	2	3	9	4.20
Local science and practical work		4	4	5	—	—	—	—	13	6.07
Natural science		—	—	—	2	2	3	3	10	4.67
Mathematics		3	3	5	5	5	5	5	32	14.95
Drawing		—	—	—	2	2	2	2	8	3.74
Music	1	—	1	2	2	2	1	1	10	4.67
Gymnastics, games and sports	1	—	2	3	3	3	3	3	18	8.41
Handwork		—	—	4	4	4	4	2	18	8.41
Domestic science and home economics		—	—	—	—	—	—	5	5	2.29

SOURCE: UNESCO. International Bureau of Education. *Preparation and Issuing of the Primary School Curriculum*. Paris/Geneva: the Organization/the Bureau, 1958. p. 184. (Publication No. 194)

Table 2.—Number of class periods per week, grades 1-6 and grades 7-9, of comprehensive schools:
by curriculum subjects

Subjects	Grades 1-6						Grades 7-9				
	Year	I	II	III	IV	V	VI	VII	VIII	IX-g, h, t, m, s ¹	IX-mek., ha, ht, p ¹
	Age	7	8	9	10	11	12	13	14	15	15
1		2	3	4	5	6	7	8	9	10	11
Total		20	24	30	34	35	35	35	35	35	35
Swedish language		9	11	11	10	8	8	3	3	5	3
Mathematics		4	4	5	5	5	5	4	4	4	—
English		—	—	—	2	5	4	4	—	—	—
Religion		2	2	2	2	2	2	2	2	1	—
Social studies		3	4	5	—	—	—	—	—	—	—
Civics, history, geography and nature studies		—	—	—	6	6	6	—	—	—	—
Civics		—	—	—	—	—	—	1	2	2	2
History		—	—	—	—	—	—	—	3	2	—
Geography		—	—	—	—	—	—	—	3	2	2
Biology		—	—	—	—	—	—	3	—	2	2
Chemistry		—	—	—	—	—	—	—	2	2	—
Physics		—	—	—	—	—	—	2	2	2	—
Music		1	1	2	2	2	1	—	—	—	—
Art		—	—	—	2	2	2	—	—	—	—
Handicraft		—	—	2	2	2	4	—	—	—	—
Music, art, handicraft		—	—	—	—	—	—	2 (in each)	4	4	2
Gymnastics		1	2	3	3	3	3	—	—	—	—

SOURCE: Orring, Jonas. *Comprehensive School and Continuation Schools in Sweden*. Stockholm: Kungl. Ecklesiastikdepartementet, 1961. p. 70 and 71.
¹ Explanation of symbols (type of "stream"): g—gymnasium; h—humanities; t—technical; m—mercantile; s—social-economics; mek—mechanics ha—commercial; ht—domestic science; p—general-practical.

gymnasium, as well as the applicability of this program to the American college's entrance and degree requirements, and the basis on which it accords advanced standing.

On the *realskola* and *gymnasium* levels, it is possible for the student who is unable to attend a regular school to prepare for the *realexamen* and *studentexamen* by correspondence. Large correspondence schools, such as the Brevskolan and N.K.I. in Stockholm, and Hermods in Malmö, serve young people, especially those living in sparsely settled areas, who would find it impossible otherwise to prepare for the examinations. Such students are called "privatists", or those who have had private or special tutoring for the examinations, rather than regular secondary school instruction.

The following table lists the programs of study for the present 4-year and the 3-year *gymnasium*. After the establishment of the comprehensive schools is complete, only the latter will remain in operation.

Art and Music Education

Art and music are a part of the programs of both elementary and secondary schools. The child who has special interest and talent may also pursue artistic and musical studies with a private teacher or at a special school outside the regular elementary and secondary school systems. The development of talent is the principal purpose of such lessons, rather than the acquisition of any fixed amount of academic knowledge.

The Royal College of Music (*Kungl. Musikhögskolan*) in Stockholm is the highest institution for musical training in Sweden. Instruction is offered in many branches of music. Examinations are given by the school which qualify candidates for certain professional posts. Such examinations are: Advanced organist (*högre organistexamen*); advanced choirmaster (*högre kantorsexamen*); music teacher (*musiklärarexamen*); bandmaster (*militär musikdirektörsexamen*); teaching in piano, violin and singing (*musikpedagogisk examen*); and piano tuner (*pianostämmarexamen*).

The period of study for these examinations varies from 2 to 4 years. In addition there are special courses for various instruments, solo singing, counterpoint, composing and conducting, as well as an opera class. Requirements for admission are talent and sufficient academic and musical training for the student to profit by the instruction.

The Royal Academy of Art (*Kungl. Konsthögskolan*) in Stockholm is the highest school of art in Sweden. Courses are offered in painting, sculpture, and architecture.

For admission to the painting and sculpture division the student must have (in the opinion of school authorities) "sufficient general education" (not necessarily completion of secondary school) to follow the courses satisfactorily. The applicant is expected to have completed a course in linear drawing and perspective and is required to submit samples of his artistic ability. Admission to the architectural division usually requires completion of an upper technical secondary school. All students of the Royal Academy of Art have access to the division of graphic art. Normally, a student is not enrolled in any section of the Academy for more than 5 years.

In Stockholm, the Graphic Institute (*Grafiska Institutet*) offers a 1-year, 2-year, or evening course of training for the graphics industry. The *studentexamen* is the normal requirement for admission. Instruction in industrial design and handicrafts is offered by the Swedish State School for Arts and Crafts (*Konstfackskolan*) in Stockholm and the School of Industrial Design in Gothenburg (*Slöjdföreningens skola*). They provide a number of courses in various phases of handicrafts and industrial arts, with special aptitude and talent as the principal criteria for admission.

Vocational Education

Many young people in Sweden who do not intend to continue their education to the university or higher education level find it important for their self advancement to enter some form of vocational training. This includes various kinds of part-time courses, training within industry, short courses in home economics, agriculture, and similar studies. As stated under "Elementary Education," the last year of the comprehensive school (grade IX) has certain "streams" or sections emphasizing vocational preparation. At present, the last year of the *folkskola* may be spent partly in vocational training and in visits to industrial plants. There is still in existence a practical *realskola* offering commercial and technical courses ending with the practical *realexamen*.

After finishing compulsory schooling, the young boy or girl may enter a lower vocational school (*Anstalt för lägre yrkesutbildning*) for domestic science training for 1 year (*Husligt arbete*); commercial training for 1 year (*Handel*); or training in industry and trade (*Industri och hantverk*) for 2, 3, or 4 years. The latter schools

Table 3.—Number of class periods for 4-year and 3-year classical and semiclassical gymnasium:
by curriculum subjects

Subjects	Year Age	Undivided Gymnasium		Semi- Classical		Classical Gymnasium		Undivided Gymnasium		Semi- Classical		Classical	
		I	II	III	IV	III	IV	I	II	III	II	III	III
1		15	16	17	18	17	18	16	17	18	17	18	18
		2	3	4	5	6	7	8	9	10	11	12	12
Hours													
Total		36	36	33	32	33	33	35	33	32	33	33	33
Religion language		2	1	2	2	2	2	1	2	2	2	2	2
Swedish		3	3	4	5	4	5	3	4	5	4	5	5
Latin		5	6	6	6	6	6	8	7	7	7	7	7
Greek		—	—	—	—	6	6	—	—	—	8	6	6
English		3	3	3	3	3	2	3	3	3	3	2	2
German		3	5	4	—	—	—	4	3	—	—	—	—
French		4	4	4	4	3	—	5	4	4	3	—	—
History with civics		2	3	4	4	4	4	3	4	3	4	3	3
Geography		2	1	—	—	—	—	1	—	—	—	—	—
Philosophy		—	—	—	3	—	3	—	—	3	—	3	—
Mathematics		3	—	—	—	—	—	—	—	—	—	—	—
Biology with health education		2	1	—	1	—	1	1	—	1	—	1	1
Physics		—	2	—	—	—	—	—	—	—	—	—	—
Chemistry		1	—	—	—	—	—	—	—	—	—	—	—
Drawing		2	2	1	—	—	—	2	1	—	—	—	—

Music.....	1	—	1	—	1	—	1	—	1	—	1
Physical education.....	3	4	3	4	3	4	3	4	3	4	3
<i>Optional Subjects:</i>											
Additional German.....	—	—	3	—	—	2	—	—	3	2	—
Additional French.....	—	—	—	—	—	—	—	—	—	—	2
Geography.....	—	—	3	—	3	—	3	—	3	—	3
Biology with health education.....	—	—	3	—	3	—	3	—	3	—	3
Music.....	—	1	1	1	1	1	1	1	1	1	1

Source: *Survey of the School System in Sweden*. Stockholm: Published by the Royal Board of Education in Sweden, 1957. p. 48.

offering a wide variety of practical courses for a number of vocations and occupations are called *verkstadsskolor*, and they may provide a full-time course of pre-apprenticeship or apprenticeship training in industry.

For those who have already had some practical or apprenticeship experience there are schools of domestic science (*Husligt arbete*) offering a 1-year course; schools of agriculture (*Jordbruk*), a 2-year course; and schools of forestry (*Skogsbruk*), a 2-year course. In each case, the training may be part-time or full-time.

Vocational training was at first mainly the responsibility of Swedish municipalities. Today, however, the National Government is assuming a larger share of the burden through its power to make grants, and through the authority of the National Board of Education.

For those who have reached the level of the *realexamen*, a 3-year upper secondary technical school (*tekniskt gymnasium*) offers courses leading to the title of *ingenjör* (engineer); this is not a university degree, but a secondary school diploma preparing for admission to technical training on university level at the Royal Higher Technical Institute in Stockholm (*Kungliga Tekniska Högskolan i Stockholm*), at Chalmers Technical Institute in Göteborg (*Chalmers Tekniska Högskola*), or at Lund University (*Lunds Universitet*).

Another type of institution admitting those who have reached the level of the *realexamen* is the 2-year commercial *gymnasium* (*handelsgymnasium*) offering business training on upper secondary level.

On the same upper secondary level as the 3-year *gymnasium* mentioned under "Secondary Education" is the 3-year vocational training school of nursing (*Sjukskoterskeskola*). Completion of the course leads to a diploma which is on the same level as the *Studentexamen*.

A 4-year vocational training school of industrial arts (*Konstfackskolan*) requires the passing of the *realexamen*, or its equivalent, for admission. Completion of this course involves 2 years of specialized training on post-secondary level.

Two types of schools offering vocational training not on university level but going beyond the *studentexamen* are the *Fackskola för hushålls ekonomi* (Vocational Training School of Home Economics) and the *Socialinstitut* (Vocational Training School for Social Welfare Workers). Each of these institutions has a 2-year curriculum leading to a diploma.

The studies taken in home economics or in social welfare after the level of the *studentexamen* has been reached or an equivalent examination has been passed might be considered as post-secondary professional courses in a specialized field.

Vocational Guidance

Beginning with the comprehensive school, vocational guidance in the sixth year is given in orientation sessions. During the eighth year all children have 3 weeks' apprenticeship in the kind of work that interests them, and in the ninth year, they may choose between different curriculums.

Authorities responsible for prevocational and vocational guidance are: The Ministry of Social Affairs, the Ministry of Education, the National Labor Market Board, the National Board of Education, the county labor boards and county school boards, and the local school boards and local labor exchanges. These boards cooperate with one another to produce the best possible results nationally and for the individual through guidance. Information on vocations, schools and apprenticeships is disseminated by means of brochures, guides, lectures, television, films and radio.

At present there are about 300 specially trained guidance teachers. Plans are in the making to increase this number gradually to a total of 900, and to improve and expand the psychotechnical tests which are already in existence.

Teacher Education

Teachers (women only) for the *leksskolor*, or kindergartens, attend 2-year teacher-training institutions, and for admission must pass the *realexamen* or its equivalent. Seven such institutions are presently in existence: Two are in Stockholm and one each in Göteborg, Luleå, Norrköping, Uppsala, and Örebro. As an essential part of teacher-preparation, students are expected to have a basic knowledge of and practical experience in child care.

Students usually begin teacher-training at a point midway through their secondary schooling (i.e. on completion of *realskola* and passing the *realexamen*). For those who plan to teach in the first 2 years (*småskola*), of the elementary school, a 2-year training course is available, and it is planned to raise this period of study to 3 years.

Teachers for the upper grades of the *folkskola*, or the middle grades of the *enhetsskola*, are trained in a special type of institution called *folkskoleseminarium*, which they may enter after passing the *realexamen*. They then take a 4-year teacher-training course, which may be considered the equivalent of completion of secondary schooling, plus 2 years of post-secondary study. Entrants who have already passed the *studentexamen* take a 2-year course.

Teachers of general academic subjects at *realskola* level or the upper stage of the *enhetsskola* (grades 7, 8, and 9) are called

Table 4.—Number of class periods per week for the 4-year Folkskoleseminarium (teacher training): by curriculum subjects

Subjects	Year Age	I 17	II 18	III 19	IV 20
1		2	3	4	5
Hours					
Total		38	37	36	30 (approximate)
Religion		2	3	2	2
Swedish		5	3	3	3
Mathematics		2½	2	2	2
History and social science		3	3	2	3
Geography		—	2	2	2
Biology and hygiene		2½	2	3	—
Physics		2	2½	2	—
Chemistry		2½	2	—	—
English		4	3	2	—
Psychology and pedagogy		—	—	—	4
Librarianship		½	—	—	½
Drawing		2	2	2	2
Handwriting		½	—	—	—
Music		2	2	2	2
Gardening		1	2	2	—
Handwork (men)		4	4	2	—
Handwork (women)		2	4	2	—
Household duties (women)		4	—	—	—
Physical Training (men)		6	5	5	5
Physical Training (women)		4	5	5	5
Practical Training:					
Teaching		—	½	1	1
Group Exercises		5½	1½	1½	3½

SOURCES *Primary Teacher Training*. (Publication No. 117.) Paris/Geneva: UNESCO/International Bureau of Education, 1950. p. 197.

adjunkt (assistant teacher). They may have had some supplementary training beyond the *folkskoleseminarium*, or even possess the university degree, *filosofie magister*. A teacher in a *gymnasium* or upper secondary school is known as a *lektor* (senior teacher), and normally will have the higher degree of *filosofie licentiat*.

The staff of teacher-training institutions usually hold university degrees. In contrast, those holding professorships in a Swedish university have the title of "doctor," and are well known in their particular fields of knowledge.

At schools of education in Stockholm, Malmö, and Gothenburg, prospective teachers for the middle and higher stages of comprehensive schools and the *real* schools, as well as the *gymnasiums*, may receive their pedagogical and subject-matter training simultaneously. Several more schools of this kind are to be set up, to gradually replace the *folkskoleseminarium*.

Special subject teachers attend separate schools. Gymnastics teachers are trained at the Royal Central Gymnastics Institute; art teachers, at the Swedish State School of Arts, Crafts, and Design; and music teachers, at the Royal Academy of Music. All of these institutions are in Stockholm. They offer professional training, after completion of the full secondary program, rather than academic study, for a university degree.

For teachers in the vocational stream at a comprehensive school the principal qualification is vocational skill. Special courses and opportunities for practice teaching have been set up for teachers of handicrafts, vocational skills of all descriptions, domestic science and other non-academic types of education.

In general, the training of teachers of all types is changing and in the process of reform, just as the basic school system is taking on a new face. To meet the new conditions, Sweden is evolving new methods of teacher education, and reshaping its requirements in teacher qualifications.

Adult Education

In Sweden, adult education (*folkbildningsarbete*) includes all educational activity engaged in by adults on a voluntary basis. The principal aim is not vocational training, but the general improvement of the individual. Adult education activities fall within the jurisdiction of the Adult Education Section of the National Board of Education. There are no admission requirements, and the studies do not lead to an academic degree. Folk

high schools (*folkhögskolor*), lectures, study circles (*studiecirklar*), public libraries, and adult education courses (*folkbildningsskurser*) form the chief means of carrying out the varied activities. Most of these activities have developed along with certain popular movements, such as the agricultural, labor, and cooperative movements, as well as religious and temperance movements.

Belonging distinctively to the Scandinavian countries are the folk high schools. In Sweden, these are residential schools offering full-time day courses, nonvocational in character, to young adults (at least 18 years old) for approximately 30 weeks a year. All the schools have 2-year courses, a few, 3-year, and some have shorter courses. Some of the schools are small with only about 30 students; others are larger, with student bodies as large as 250. The average number of students is about 100, and the total number attending these schools is approximately 11,000 a year. In 1963, there were 98 *folkhögskolor* in existence, each of which received grants from the National Government. These schools are proving very popular and the number increases each year.

There are two types of *folkhögskolor*. First, are the so-called "County Councils" schools, mainly attended by students from within the county. On the other hand, schools connected with one of the national movements, such as the labor or agricultural movements, draw their students from the country as a whole.

All the schools have 2-year courses; a few have 3-year, and some, shorter courses. History and social science studies form an important part of the curriculum. In the last 10 years, psychology and sociology have been emphasized to a greater degree than ever before. The growing role of technology and the need for language skills have given prime importance to the study of natural science, Swedish, and English.

In about 600 localities in Sweden local organizations, or institutes, have been formed to present lectures on a number of topics. Each county has a *föreläsningförbund* or association which coordinates these adult education activities and gives preliminary approval for the lectures. Final approval comes from the National Board of Education.

The study circle (*studiecirkel*) is another popular form of adult education. These circles are formed by a number of associations and organizations, and meet for a specified number of times according to a fixed plan. To receive State support, the study circle must follow certain rules, such as meeting 10 times for at least 20 hours, with at least 5 participants and not more than 25 present at each session. Not more than two-thirds of the study time must be devoted to practical work. Special courses may be held to train

leaders of the circles, or an expert may be called upon to take charge.

In Sweden, there are now about 1,000 public libraries, many of which were originally founded in connection with study circles. In 1930, each of the 24 counties established a library within its domain. The county libraries make grants to city and local libraries. Through their lending and guidance services, these libraries render substantial assistance in the field of adult education.

In addition to the county associations previously mentioned, each of the 24 counties has a similar adult education association, the purpose of which is to help solve problems of adult education of special concern to the county. These county associations arrange art exhibitions, organize theater performances, and promote adult education courses on current problems. These programs are held in designated parts of the county.

Through all the varied programs and activities discussed above, adult education has expanded considerably in recent years to meet the growing needs and demands of the Swedish population.

Higher Education

Sweden has 4 universities, 2 higher technological institutions, and 15 special institutions on higher education level. In each case the requirement for admission is the passing of the Swedish *studentexamen*. A student may apply to take the examination for a degree when he feels he is ready. The time element is not of prime importance. The language of instruction is Swedish except at the Institute for English-Speaking Students of the University of Stockholm.

Universities

The four universities are: The University of Gothenburg (*Göteborgs Universitet*), the Royal Caroline University of Lund (*Kungliga Karolinska Universitetet i Lund*), the Royal University of Stockholm (*Kungliga Universitetet i Stockholm*), and the Royal University of Uppsala (*Kungliga Universitetet i Uppsala*).

The listing which follows shows the faculties of each of the universities, the names of the degrees and titles awarded, and the average number of years required for each degree.

List A. Swedish universities, faculties, and degrees offered

University of Gothenburg	University of Lund	University of Stockholm	University of Uppsala
Faculties			
Medicine	Theology	Law	Humanities (history, philosophy and philology divisions)
Humanities (history, philosophy and philology divisions)	Law	Humanities (divisions of history, philosophy and philology)	Theology
Mathematics and natural sciences	Medicine	Science	Law
	Humanities (history, philosophy and philology divisions)	Institute for English-speaking students	Medicine
	Mathematics and natural sciences		Mathematics and natural sciences
	Economics		
Titles or Degrees Offered ¹ with Average Number of Years of Study after the Studentexam			
<i>Years</i>	<i>Years</i>	<i>Years</i>	<i>Years</i>
<i>Kandidat in Medicine</i> 2	<i>Kandidat in Medicine</i> 2	<i>Kandidat in Philosophy</i> 3	<i>Kandidat in Philosophy</i> 3
(MK) (Does not qualify to practice medicine)	(MK)	(FK)	(FK)
<i>Kandidat in Philosophy</i> 3	<i>Ekonomexamen</i> (professional examination in economics; not a degree and has no other name) 3	<i>Kandidat in Law</i> (JK) 4	<i>Kandidat in Theology</i> 4
(FK)	<i>Kandidat in Philosophy</i> 3	<i>Magister in Philosophy</i> 3½	(TK)
<i>Magister in Political Science</i> (PM) 3	<i>Kandidat in Philosophy</i> 3	(FM)	<i>Kandidat in Law</i> (JK) 4
<i>Magister in Philosophy</i> (FM) 3	(FK)	<i>Magister in Law and Social Science</i> (PM) 4	<i>Kandidat in Medicine</i> 2
<i>Licentiat in Philosophy</i> 6	<i>Kandidat in Law</i> (JK) 5	<i>Licentiat in Philosophy</i> 6	(MK)
	<i>Filosofisk Ämbetsexamen</i> 3	(FL)	<i>Magister in Philosophy</i> 4
		<i>Licentiat in Law</i> (JL) 7	(FM)
		<i>Doktor in Philosophy</i> 7	<i>Licentiat in Theology</i> 6
			(TL)

(FL) <i>Licentiat</i> in Medicine	6	(professional examina- tion in philosophy; not a degree and has no other name)	(FD) <i>Doktor</i> in Law (JD)	8	<i>Licentiat</i> in Philosophy (FL)	6
(ML) (Qualification to practice medicine)					<i>Licentiat</i> in Law (JL)	6
<i>Doktor</i> in Philosophy					<i>Licentiat</i> in Medicine (ML)	6
(FD) (research and dissertation after <i>Licentiat</i>)					<i>Licentiat</i> in Philosophy (FL)	6
<i>Doktor</i> in Medicine (MD) (research and disserta- tion after <i>Licentiat</i>)					<i>Licentiat</i> in Economics (Ekon. L.)	6
					<i>Doktor</i> —Research and dissertation after <i>Licentiat</i> .	
					<i>Juridisk-Samhällsveten- skaplig examen</i> (Pro- fessional examination in law and political science; no other name)	4
					<i>Filosofisk-Samhällsveten- skaplig examen</i> (Ex- amination in Philoso- phy; no other name)	4

¹ Three of the universities, Gothenburg, Stockholm, and Uppsala, have both the *Kandidat* and *Magister* degrees in philosophy. Both are first degrees with little difference in the time element involved. The *Magister* degree in philosophy is the professional qualification for teaching.

Technical and Professional Institutions

Other Swedish institutions on the higher education level offer instruction in widely varied technical and professional fields.

Technological.—The Royal Institute of Technology in Stockholm (*Kungliga Tekniska Högskolan*) has nine divisions: Physics, mechanical engineering, aeronautics and shipbuilding, electrical engineering, civil engineering, chemical engineering, mining and metallurgy, architecture, and surveying.

Professional titles awarded are: *Civilingenjör* (Civil Engineer), *Bergsingenjör* (Mining Engineer), and *Arkitekt* (Architect), all awarded after 4 years of study; *Teknisk Licentiatexamen* (*Tekn. L.*—Licentiate in Technology), after a further 2 years of study, plus thesis; and *Teknisk Doktorsgrad* (*Tekn.D.*—Doctor in Technology) upon completion of a doctoral thesis after the Licentiate.

Chalmers Institute of Technology (*Chalmers Tekniska Högskola*) in Gothenburg has seven divisions: Physics (including mathematics), mechanical engineering (including textile engineering), naval architecture, electrical engineering (including telecommunications), civil engineering, chemical engineering (including nuclear chemistry), and architecture.

Titles and diplomas awarded are: *Civilingenjör* (Civil Engineer), after 4 years of study; *Teknisk Licentiatexamen* (Licentiate in Engineering), after a further 2 years of study; *Teknologie Doktorsgrad* (Doctorate in Engineering), upon completion of a doctoral thesis after the Licentiate.

Agricultural.—The Alnarp Agricultural, Dairy, and Horticultural Institute (*Alnarps Lantbruks, Mejeri, och Tradgardsinstitut*) offers the professional title of Dairying Engineer, after an 8-semester course.

The Royal Agricultural College and National Agricultural Research Center at Uppsala (*Lantbrukshögskolan och Statens Lantbruksförsök*) offers the professional title of *Agronom* (*Agr.*—Agronomist) after 3–3½ years of study; *Agronomie Licentiat* (*Agri.L.*—Licentiate in Agronomy) after a further 2–3 years; and *Agronomie Doktor* (*Agr.D.*—Doctor in Agronomy) after a further 3 years of study, making a possible total of 8–9 years. A thesis must also be accepted.

The Royal School of Forestry in Stockholm (*Kungliga Skogshögskolan*) offers the professional title of *Civiljögmastare* (forester) at the end of 3½–4 years of study. The advanced titles of *Skogsvetenskaplig Licentiat* (Licentiate in Forestry) and *Skogsvetenskaplig Doktor* (Doctor of Forestry) are also awarded.

Commercial.—Two institutions offering commercial studies on the higher education level in Sweden are the Gothenburg School of Commerce (*Handelshögskolan i Göteborg*) and the Stockholm School of Economics (*Handelshögskolan i Stockholm*). The professional title of *Civilekonom* (economist) is awarded after six semesters, while the title of *Ekonomie Licentiat* (Licentiate in Economics) is awarded after 9–10 semesters. The title of *Ekonomie Doktor* (Doctorate) requires an acceptable thesis after the *Licentiat*.

Dental and medical.—Sweden's three dental schools are: The Royal Dental School at Malmö (*Tandläkarhögskolan i Malmö*); the Royal School of Dentistry at Stockholm (*Kungliga Tandläkarhögskolan i Stockholm*); and the Dental Institute at Umeå (*Tandläkarinstitutet Umeå*). The Dental School at Malmö awards the professional title of *Tandlakare* (Dentist) after a 5-year course, followed by the title of *Odontologie Doktor* (Doctor of Odontology) after acceptance of a dissertation. The School of Dentistry at Stockholm and the Dental Institute at Umeå award the title of *Odontologie Kandidat* (Candidate in Odontology) after a 5-year course, followed by the title of *Odontologie Doktor* (Doctor of Odontology) after a further 2–4 years and a dissertation.

There are two Swedish schools of medicine. The Royal Caroline Institute of Medicine and Surgery in Stockholm (*Kungliga Karolinska Mediko-Kirurgiska Institutet*) offers the degree of *Medicine Licentiat* (*Med. Lic.*) after 6½ years of preparation. This is the requirement for practicing medicine in Sweden. The *Licentiat* may be followed by the title of *Medicine Doktor* (Doctor of Medicine).

The Royal Medical School of Umeå (*Kungliga Medicinska Högskolan*) at present offers only the advanced degrees of *Licentiat* and *Doktor*. After 1965 the degrees of Bachelor of Medicine, *Licentiate*, and *Doctor* will be available.

Other schools.—The Royal Pharmaceutical Institute in Stockholm (*Kungliga Farmaceutiska Institutet*) offers a 3-year course for the title of *Kandidat* (Candidate), and a 5-year course for the title of *Apotekar* (Pharmacist). The licentiate and doctorate are awarded after the Pharmacist degree.

The three Swedish social institutes offering courses at the higher education level are: The Institute of Social Studies in Gothenburg (*Socialinstitutet i Göteborg*), the Social Institute of Southern Sweden (*Sydsvenska Socialinstitutet*), and the Stockholm School of Social Work and Public Administration (*Socialinstitutet i Stockholm*). Each of these institutions offers a 2-year course in social work following the passing of the *studentexamen*.

The Royal Veterinary College in Stockholm (*Kungliga Veterinärhögskolan*) offers the professional title of *Veterinar* (Veterinarian). The length of the course of study is not fixed, depending upon the individual student. A doctoral degree is also granted.

Special Education

Special education in Sweden refers to that which is provided for those children who, because they suffer from some physical or mental handicap, cannot attend regular schools.

At first, this type of training was entirely in the hands of private organizations and individuals. As the needs have grown, the National Government has assumed a larger share of the responsibility for the handicapped, until it now carries the major portion of the burden under the authority of the National Board of Education.

Swedish educational authorities have sought to train the handicapped for suitable occupations, as far as possible. To this end, they have enlisted the aid of the medical profession in efforts to reduce the limitations imposed by handicaps.

Once a year, each church parish submits a list of blind, deaf, and disabled parishioners, under 20 years of age, to the local Community School Committee, which in turn transmits the data to the Board of Education. Further, regular schools have made provision for children who need special instruction, such as "relief," "reading," "defective hearing," and "school readiness" classes.

On the other hand, where it is not possible for the child to attend a regular school, special schools are provided. They include schools for the blind and the deaf, for mentally retarded children and young delinquents; and schools in hospitals and in orphanages.

Basic, compulsory education of the blind is concentrated in one institution, Tomtebodan, outside Stockholm. The complete course lasts 11 years; the usual academic subjects are taught with the addition of braille and typing. In the last year of study practical subjects are taught and vocational guidance is given. There are schools at Kristinehamn and Växjö for those who became blind as adults. A government institution in Lund takes care of blind people who suffer from other defects.

Compulsory education of the deaf is carried out in four district schools: Manilla in Stockholm, Lund, Vänersborg, and Härnösand. A special school is located in Örebro for those who are not strictly characterized as deaf, but who suffer from defects of speech and

hearing. In addition, there are continuation schools for the deaf at Vänersborg, an agricultural school for boys at Broby, and one for girls in Växjö. A work home is maintained at Mogård for the deaf who have other defects. Compulsory schooling lasts 8 years in the district school and 2 years in the continuation school, with a possible further year or two on a voluntary basis. At the agricultural schools there is a supplementary course of a "folk high school" type. In Boden the government has set up a kindergarten for the infant deaf, which is in addition to 10 State supported kindergartens for the deaf founded by county councils, municipalities, and private sources.

In certain hospitals and other medical institutions where children must stay for long periods, schools are established and children are taught to the extent that their health permits. Orphanages also maintain schools of this type. Special schools for cripples in Stockholm, Gothenburg, Hälsingborg, and Härnösand provide both teaching and training and guidance facilities. Schools for epileptics are located in Vilhelmsro (outside Jönköping) and Margaretahemmet (outside Uppsala).

For mentally retarded children special schools are organized as a part of the county schools. These are 8-year schools (3 years of preparatory school and 5 years of regular school) with a 2-year continuation course stressing practical subjects. In more heavily populated areas these may be day schools, thus enabling the child to live with his parents. Two State schools, in Sabohed (for boys) and Vänersborg (for girls), provide care for the more difficult cases.

Children with behavior disturbances who must be cared for by the State are taught and trained in so-called "delinquent schools" (*ungdomsvardsskola*). These children are channeled, according to sex, age, intellectual development and personality peculiarities, into different types of schools, such as boarding schools, vocational schools, and girls' boarding schools stressing domestic science studies. In these schools vocational training and remedial classes are available as well as regular class instruction. In cases where the child is confined to the home, local authorities may arrange for instruction by a private teacher. Teams of specialists are also available to provide services for all types of handicapped children.

Educational Television and Radio

The Swedish schools, for quite a long period, have had educational radio programs through Swedish Radio, and in February

1961, regular telecasts for schools were inaugurated under the newly established School-TV Department. The television programs have a running time of 20 minutes on Mondays, Wednesdays, and Fridays, for approximately 20,000 students, 14 to 15 years of age, not counting the adult viewers. According to estimates by school authorities, from 500 to 800 schools in Sweden are showing these programs, which continue to expand in number. The first programs included the following five subjects: Orientation in various professions, current events programs, physics, Danish language, and geography.

The Director of the School TV Department has stressed the fact that the programs are to be considered as experiments only. A special committee is studying all aspects of educational TV, and it is planned to extend and enlarge the service.

Inquiries about Swedish education may be addressed to: Royal Ministry of Education and Ecclesiastical Affairs (Kungliga Eklesiastikdepartementet) Stockholm, Sweden.

Glossary of Educational Terms

- Adjunkt*—teacher in grades 7, 8, and 9.
- Anstalt för lägre yrkesutbildning*—lower vocational training school of home economics, commerce and industry and trade.
- Daghem or lekola*—preprimary school.
- Enhetsskola*—9-year comprehensive school.
- Fackskola för hushålls ekonomi*—vocational training school of home economics.
- Filosofie licentiat*—higher university degree, beyond *magister*.
- Filosofie magister*—first university degree, 3-4 years. (See footnote, list A).
- Folkbildningsarbete*—adult education.
- Folkhögskolor*—institution offering part-time general secondary education for adults.
- Folkskola*—institution covering the period of compulsory schooling.
- Folkskoleseminarium*—teacher-training institution.
- Grundskola*—future name for *enhetsskola*.
- Gymnasium*—State upper general secondary school.
- Högre flickskola*—municipal general secondary school for girls.
- Högre folkskola*—lower general secondary school.
- Ingenjör*—title of graduate of upper secondary technical school.
- Kandidat*—a first degree earned at university. (See footnote, list A.)
- Kungliga Ecklesiastikdepartementet*—Royal Ministry of Education and Ecclesiastical Affairs.
- Kungliga Konsthögskolan*—Royal Academy of Art.
- Konsthögskola*—vocational training school of fine arts.
- Kungliga Musikhögskolan*—Royal College of Music.
- Länsskolnämnd*—County Educational Boards.
- Lekskolor*—Play schools.
- Lektor*—teacher in upper secondary school (gymnasium).
- Överstyrelsen för de tekniska högskolorna*—Board of Institutes of Technology.

Överstyrelsen för Yrkesutbildning—Board of Vocational Training.
Realexamen—examination at end of lower secondary schooling.
Realskola—lower secondary school.
Riksdag—Parliament.
Sjukskoterskeskola—vocational training school of nursing.
Skolöverstyrelsen—Board of Education (national).
Ungdomsvårdsskola—schools for delinquents.
Universitetskanslerämbetet—Office of the Chancellor of Universities.
Verkstadskolor—vocational schools offering practical courses for different occupations and trades.

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